

**SIGNAL QUALITY MONITORING AND
CONTROL FOR A MEDICAL DEVICE SYSTEM**

ABSTRACT OF THE INVENTION

Method and apparatus for detecting possible interference in a neurological signal received from a monitoring element of a medical device system. The monitoring element monitors a condition or a symptom of a nervous system disorder being treated and provides a neurological signal to the medical device system for purposes of providing closed-loop feedback control. The system analyzes various parameters of the received signal by taking instantaneous measurements of data points in moving window and thereby determining whether the signal is of poor quality. If the signal is of determined poor quality, it is removed from consideration in the closed-loop feedback control system until it is determined that the signal quality has sufficiently been restored.